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| 10/572,944 | 10/13/2006 | Christophe Fringant | 287782US0PCT | 3153 |
| 22850 7590 09/18/2009 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | | |
| EXAMINER PEPTONE, MICHAEL F | | | | |
| ART UNIT 1796 | | PAPER NUMBER | | |
| NOTIFICATION DATE 09/18/2009 | | DELIVERY MODE ELECTRONIC | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/572,944

Applicant(s)

FRINGANT ET AL.

Examiner

MICHAEL PEPITONE

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13, 15, 16, 21-23, 26, 28 and 36-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13, 15, 16, 21-23, 26, 28 and 36-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/30/09 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

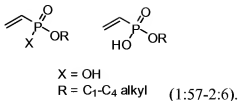
Claims 13, 15-16, 21-23, 26, 28 and 44-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Padget *et al.* (EP 0185464) in view of Denk *et al.* (US 2,971,948).

Regarding claims 13, 15-16, 28, and 44-45: Padget *et al.* teaches a copolymer composition (pg. 1, ln. 1-5; pg. 7, ln. 1-11) comprising copolymer A (pg. 5, ln. 28-35; pg. 8, ln. 11-30) and copolymer B (pg. 6, ln. 7-11; pg. 10, ln. 11-25); wherein copolymer A comprises 27.2% vinylidene chloride, 70.8% n-butyl acrylate, and 2.0% acrylic acid (Table 1, for use in ex. 15), and has a molecular weight (M_p) of 114,898 (pg. 5, ln. 1-16); copolymer B comprises 59.4% vinylidene chloride, 5.1% n-butyl acrylate, 33.5 methyl methacrylate, and 2.0% acrylic acid (Table 3, for use in ex. 15) and has a molecular weight (M_p) of 19,171 (pg. 5, ln. 1-16).

Padget *et al.* teaches a copolymer composition copolymer A comprises 27.2% vinylidene chloride, 70.8% n-butyl acrylate, and 2.0% acrylic acid (Table 1, for use in ex. 15), and has a molecular weight (M_p) of 114,898 (pg. 5, ln. 1-16). The preferred embodiment does not disclose at least 50 wt% of vinylidene chloride. However, preferred compositions of Copolymer A can comprise 10 to 70 wt% of vinylidene chloride (8:11-13). Therefore, it would have been obvious to one having skill in the art to have utilized up to 70 wt% of vinylidene chloride and would have been motivated to do so since Padget *et al.* teaches up to 70 wt% vinylidene chloride can be employed to provide a T_g in the range of -50 to <0 °C (pg. 8, ln. 1-15).

Padget *et al.* teaches copolymer B can include adhesion promoting functionalities {acid} (pg. 15, ln. 12-25).

Padget *et al.* does not teach the copolymer B comprising a monomeric unit containing a phosphonate group. However, Denk *et al.* teaches vinylidene chloride copolymers (1:16-17; 1:67-2:6) comprising vinyl phosphonic acids (1:57-70) as adhesion promoters (2:7-8)



Padget *et al.* and Denk *et al.* are analogous art because they are concerned with a similar technical difficulty, namely the preparation of vinylidene chloride copolymers containing adhesion promoters. At the time of invention a person of ordinary skill in the art would have found it obvious to have combined vinyl phosphonic acids, as taught by Denk *et al.* in the invention of Padget *et al.*, and would have been motivated to do so since Denk *et al.* suggests that such vinyl phosphonic acids provide copolymers which adhere extremely well to metal surfaces (2:7-8).

Regarding claims 21: Padget *et al.* teaches blends of copolymers A and B in an aqueous dispersion (pg. 27, ln. 5-25)

Regarding claims 22-23: Padget *et al.* teaches a contact adhesive (pg. 1, ln. 1-16) is coated onto a polymer surface (pg. 4, ln. 12-21; pg. 21, ln. 21-29).

Regarding claim 26: Padget *et al.* teaches a contact adhesive (pg. 1, ln. 1-16) is coated onto a substrate (pg. 4, ln. 12-21; pg. 21, ln. 21-29) and is allowed to dry.

Claims 36-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Padget *et al.* (EP 0185464) in view of Thames *et al.* (US 6,599,972).

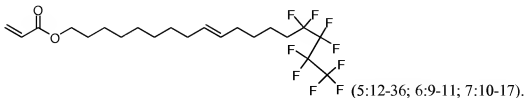
Regarding claims 36-38, 43: Padget *et al.* teaches a copolymer composition (pg. 1, ln. 1-5; pg. 7, ln. 1-11) comprising copolymer A (pg. 5, ln. 28-35; pg. 8, ln. 11-30) and copolymer B (pg. 6, ln. 7-11; pg. 10, ln. 11-25); wherein copolymer A comprises 27.2% vinylidene chloride,

70.8% n-butyl acrylate, and 2.0% acrylic acid (Table 1, for use in ex. 15), and has a molecular weight (M_p) of 114,898 (pg. 5, ln. 1-16); copolymer B comprises 59.4% vinylidene chloride, 5.1% n-butyl acrylate, 33.5 methyl methacrylate, and 2.0% acrylic acid (Table 3, for use in ex. 15) and has a molecular weight (M_p) of 19,171 (pg. 5, ln. 1-16).

Padget *et al.* teaches a copolymer composition copolymer A comprises 27.2% vinylidene chloride, 70.8% n-butyl acrylate, and 2.0% acrylic acid (Table 1, for use in ex. 15), and has a molecular weight (M_p) of 114,898 (pg. 5, ln. 1-16). The preferred embodiment does not disclose at least 50 wt% of vinylidene chloride. However, preferred compositions of Copolymer A can comprise 10 to 70 wt% of vinylidene chloride (8:11-13). Therefore, it would have been obvious to one having skill in the art to have utilized up to 70 wt% of vinylidene chloride and would have been motivated to do so since Padget *et al.* teaches up to 70 wt% vinylidene chloride can be employed to provide a T_g in the range of -50 to <0 °C (pg. 8, ln. 1-15).

Padget *et al.* teaches copolymer B can include internally plasticizing comonomers (pg. 11, ln. 15-pg. 12, ln. 9).

Padget *et al.* does not teach the copolymer B comprising a monomeric unit containing a perfluoroalkyl moiety. However, Thames *et al.* teaches a latex composition for contact adhesives (abstract) comprising an ethylenically unsaturated internal plasticizer containing a perfluoroalkyl moiety $\{R_2, R_3, R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12} = H; R_1 = C_5F_{11} \{ex. perfluorohexyl\}; a = 3; b = 1; c = 8; Z = -(CO)-O-$ (4:19-49; 5:12-36; 6:9-11; 6:24-26; 7:10-17)



Padget *et al.* and Thames *et al.* are analogous art because they are concerned with a similar technical difficulty, namely the preparation of internally plasticized latex based contact adhesives. At the time of invention a person of ordinary skill in the art would have found it obvious to have combined internal plasticizer containing a perfluoroalkyl moiety, as taught by Thames *et al.* in the invention of Padget *et al.*, and would have been motivated to do so since Thames *et al.* suggests that such internal plasticizer containing a perfluoroalkyl moiety provide self plasticized compositions with no subsequent VOC emissions (4:29-36).

Regarding claim 39: Padget *et al.* teaches blends of copolymers A and B in an aqueous dispersion (pg. 27, ln. 5-25)

Regarding claims 40-41: Padget *et al.* teaches a contact adhesive (pg. 1, ln. 1-16) is coated onto a polymer surface (pg. 4, ln. 12-21; pg. 21, ln. 21-29).

Regarding claims 42: Padget *et al.* teaches a contact adhesive (pg. 1, ln. 1-16) is coated onto a substrate (pg. 4, ln. 12-21; pg. 21, ln. 21-29) and is allowed to dry.

Claims 36-43 and 46-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Padget *et al.* (EP 0185464) in view of Behr *et al.* (US 6,365,769).

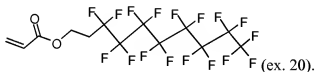
Regarding claims 36-38, 43, and 46-47: Padget *et al.* teaches a copolymer composition (pg. 1, ln. 1-5; pg. 7, ln. 1-11) comprising copolymer A (pg. 5, ln. 28-35; pg. 8, ln. 11-30) and copolymer B (pg. 6, ln. 7-11; pg. 10, ln. 11-25); wherein copolymer A comprises 27.2% vinylidene chloride, 70.8% n-butyl acrylate, and 2.0% acrylic acid (Table 1, for use in ex. 15), and has a molecular weight (M_p) of 114,898 (pg. 5, ln. 1-16); copolymer B comprises 59.4%

vinylidene chloride, 5.1% n-butyl acrylate, 33.5 methyl methacrylate, and 2.0% acrylic acid (Table 3, for use in ex. 15) and has a molecular weight (M_p) of 19,171 (pg. 5, ln. 1-16).

Padget *et al.* teaches a copolymer composition copolymer A comprises 27.2% vinylidene chloride, 70.8% n-butyl acrylate, and 2.0% acrylic acid (Table 1, for use in ex. 15), and has a molecular weight (M_p) of 114,898 (pg. 5, ln. 1-16). The preferred embodiment does not disclose at least 50 wt% of vinylidene chloride. However, preferred compositions of Copolymer A can comprise 10 to 70 wt% of vinylidene chloride (8:11-13). Therefore, it would have been obvious to one having skill in the art to have utilized up to 70 wt% of vinylidene chloride and would have been motivated to do so since Padget *et al.* teaches up to 70 wt% vinylidene chloride can be employed to provide a T_g in the range of -50 to <0 °C (pg. 8, ln. 1-15).

Padget *et al.* teaches the composition {aqueous latex} can include (pg. 21, ln. 12-20).

Padget *et al.* does not teach the monomers of claims 46-47. However, Behr *et al.* teaches fluoroalkyl(meth)acrylates as polymerizable surfactants in emulsions containing vinylidene chloride (4:15-20; 6:12-47; 13:12-40; ex. 20), with a specific fluoroalkyl(meth)acrylates shown below (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl acrylate):



Padget *et al.* and Behr *et al.* are analogous art because they are concerned with a similar technical difficulty, namely the preparation of vinylidene chloride emulsions containing surfactants. At the time of invention a person of ordinary skill in the art would have found it obvious to have combined fluoroalkyl(meth)acrylates surfactants, as taught by Behr *et al.* in the invention of Padget *et al.*, and would have been motivated to do so since Behr *et al.* suggests that

such fluoroalkyl(meth)acrylates are useful in improving or imparting properties to solutions and substrates such as wetting, penetration, spreading, emulsification, and flow properties (4:15-25).

Regarding claim 39: Padget *et al.* teaches blends of copolymers A and B in an aqueous dispersion (pg. 27, ln. 5-25)

Regarding claims 40-41: Padget *et al.* teaches a contact adhesive (pg. 1, ln. 1-16) is coated onto a polymer surface (pg. 4, ln. 12-21; pg. 21, ln. 21-29).

Regarding claims 42: Padget *et al.* teaches a contact adhesive (pg. 1, ln. 1-16) is coated onto a substrate (pg. 4, ln. 12-21; pg. 21, ln. 21-29) and is allowed to dry.

The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. See attached form PTO-892.

Response to Arguments

The rejection of claims based upon Padget *et al.* (EP 0185464) and Thames *et al.* (US 6,599,972), is maintained for reason of record and following response.

Padget *et al.* (EP '464) discloses copolymer B can include internally plasticizing comonomers (pg. 11, ln. 15-pg. 12, ln. 9).

Thames *et al.* (US '972) discloses a latex composition for contact adhesives (abstract) comprising an ethylenically unsaturated internal plasticizer containing a perfluoroalkyl moiety $\{R_{1-12} = C_nH_xF_y; n=1-10, x=y=0 \text{ to } 2n+1\}$ (4:19-49; 5:12-36; 6:9-26). Thames *et al.* (US '972) discloses substituted phenyl, benzyl, and tolyl having straight or branched alkyl and/or fluoroalkyl substituents (7:5-10), wherein substituted is contemplated to include all permissible substituents of organic compounds (7:35-49). Thames *et al.* (US '972) discloses linear or

branched alkyl and fluoroalkyl groups having 1 to 10 carbon atoms (7:11-18). The internal plasticizer of general formula 1 (5:12-6:27) can include $R_1, R_2, R_3, R_4, R_5, R_8, R_9, R_{10}, R_{11}, R_{12} = C_nH_xF_y$; $n=1-10, x=y=0 \text{ to } 2n+1$ (4:19-49; 5:12-36). While the preferred embodiments do not specifically list a perfluoroalkyl group as defined in claim 18, the reference must be considered for all that it discloses and must not be limited to preferred embodiments [see MPEP 2123].

Furthermore, if one of ordinary skill in the art is able to "at once envisage" the specific compound within the generic chemical formula, the compound is anticipated. One of ordinary skill in the art must be able to draw the structural formula or write the name of each of the compounds included in the generic formula before any of the compounds can be "at once envisaged." *In re Petering*, 301 F.2d 676, 133 USPQ 275 (CCPA 1962). For example, with $R_1 =$ perfluorooctyl radical $\{C_nH_xF_y; n=8, x=0, y=17\}$, $R_2, R_3 = H$, and $a = 1$ { a and c have a value of 0-20, and the sum of a and c is at least 10 (6:24-26)}, affords an internal plasticizer compound having a $-(CH_2)_a-C_8F_{17}$ moiety, corresponding to component B of instant claim 18 having a $-(CH_2)_b-C_cF_{2c+1}$ moiety with $b=1$ and $c = 8$. Additionally, Thames *et al.* (US '972) discloses linear or branched alkyl and fluoroalkyl groups having 1 to 10 carbon atoms (7:11-18), including fluorinated alkyls such as pefluorobutyl, and partially fluorinated alkyls such as 1,1,2,2,2-pentafluorobutyl. One having skill in the art would recognize the fluoroalkyl groups having 1 to 10 carbon atoms would include fluorinated C_1 - C_{10} alkyls such as perfluorooctyl, and partially fluorinated C_1 - C_{10} alkyls such as semifluorinated alkyl radicals $\{F(CF_2)_m(CH_2)_n\}$.

The rejection of claims based upon Padgett *et al.* (EP 0185464) and Denk *et al.* (US 2,971,948) is maintained for reason of record and following response.

Padget *et al.* (EP '464) discloses copolymer B can include adhesion promoting functionalities {acid} (pg. 15, ln. 12-25).

Denk *et al.* (US '948) discloses vinylidene chloride copolymers (1:16-17; 1:67-2:6; 4:6-15) comprising vinyl phosphonic acids (1:57-70) as adhesion promoters (2:7-8). Denk *et al.* (US '948) clearly discloses copolymers containing vinyl chloride (1:70) and vinylidene chloride (2:1); i.e. a copolymer is synthesized from vinyl chloride, vinylidene chloride, and vinyl phosphonic acid (4:6-15) {substituting .vinylidene chloride for vinyl acetate in Ex. 1 (3:5-19)}. Furthermore, Denk *et al.* (US '948) discloses the weight portion of vinyl chloride to vinylidene chloride is 95:5 to 5:95, indicating a substantial amount of vinylidene chloride {up to 95 wt%} may be employed in the composition (2:7-15; 4:5-15).

In response to applicant's argument that Denk *et al.* (US '948) is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992) [see MPEP 2142]. In this case, Padget *et al.* (EP '464) and Denk *et al.* (US '948) are analogous art because they are concerned with a similar technical difficulty, namely the preparation of vinylidene chloride copolymers containing adhesion promoters.

The Declaration under 37 CFR 1.132 filed 6/30/09 is insufficient to overcome the rejection of claims based upon Padget *et al.* (EP 0185464) and Thames *et al.* (US 6,599,972); and Padget *et al.* (EP 0185464) and Denk *et al.* (US 2,971,948) as set forth in the last Office action because: In response to applicant's argument that there is no suggestion to combine the

references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992) [see MPEP 2144]. In this case, Padgett *et al.* teaches copolymer B can include internally plasticizing comonomers (pg. 11, ln. 15-pg. 12, ln. 9); and Thames *et al.* teaches a latex composition for contact adhesives (abstract) comprising an ethylenically unsaturated internal plasticizer containing a perfluoroalkyl moiety {see above}. One having skill in the art would have been motivated to use the internal plasticizers of Thames *et al.* as they provide self plasticized compositions with no subsequent VOC emissions (4:29-36), thereby affording an environmentally friendly latex composition.

Denk *et al.* (US '948) discloses the weight portion of vinyl chloride to vinylidene chloride is 95:5 to 5:95, indicating a substantial amount of vinylidene chloride {up to 95 wt%} may be employed in the composition (2:7-15; 4:5-15).

The Declaration is insufficient for the reasons set forth above to overcome the rejection.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL PEPITONE whose telephone number is (571)270-3299. The examiner can normally be reached on M-F, 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo/
Supervisory Patent Examiner, Art Unit 1796

MFP
10-September-09